

RECORDS OF PYRGOTIDAE FROM MISSISSIPPI,  
WITH ADDITIONAL NOTES ON THE  
DISTRIBUTION OF *SPHECOMYIELLA VALIDA*  
(HARRIS) AND *PYRGOTA UNDATA* WIEDEMANN  
(DIPTERA)<sup>1</sup>

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ABSTRACT: *Boreoethrinax maculipennis* (Macquart), *Pyrgota undata* Wiedemann and *Sphecomyiella valida* (Harris) are reported from Mississippi for the first time, and the flight period of each is noted. The known distribution of *S. valida* is extended to Arizona and North Dakota. *Pyrgota undata* is also recorded from North Dakota.

Pyrgotid flies, like their hosts the adult June beetles (Scarabaeidae), are generally nocturnal and, because of their parasitic activity, may reduce white grub population levels. Steyskal (1978) presented a key for the separation of the eight North American species and outlined the known distribution of each.

The nocturnal habit of the flies makes them somewhat difficult to collect, however they are attracted to light and may occasionally be collected in moderate numbers in light traps. Most of the specimens herein reported were taken at blacklight.

No species of pyrgotis have been previously recorded from Mississippi; however, extensive light trapping throughout the state during the last four years has revealed the presence of the following three species. Several records were obtained from the Mississippi Entomological Museum (MEM) at Mississippi State University and the personal collection of A.E. Zuccaro (AEZ). All other specimens are in the collections of the University of Mississippi (UM) or the author (PKL).

Mississippi Records

*Boreoethrinax maculipennis* (Macquart).

*Adams Co.* Natchez, 17 Apr. 1978, 3 May 1979, A.E. Zuccaro (AEZ); 5 mi. S. Natchez, 15 Apr. 1979, A.E. Zuccaro and P.K. Lago (UM).

*Lee Co.* Tupelo, 11 May 1970, J. Bryson (MEM). *Okibbeha Co.* Starkville, 6 records — 16 Apr. through 26 Apr. 1975 and 1976. W.H. Cross (MEM).

*Union Co.* No locality, 1 Apr. 1973, B.R. Jennings (UM). Specimens examined — 24.

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I have collected specimens of this species only once in Mississippi (Adams Co., 5 mi. S. Natchez). On that occasion a blacklight was set at dusk in an area of mixed hardwoods and pines near a recently cut-over site. Eight specimens of *B. maculipennis* were taken along with one specimen of *Pyrgota undata* Wiedemann and several *Serica*, *Diploptaxis* and *Phyllophaga* (Scarabaeidae). All were collected before midnight (CDT). The records indicate this species is active primarily in early spring.

***Pyrgota undata* Wiedemann.**

Adams Co. Natchez, 15 Apr. 1979, A.E. Zuccaro (AEZ); 5 mi. S. Natchez, 3, 5 July 1978, A.E. Zuccaro (AEZ), 15 Apr. 1979, A.E. Zuccaro and P.K. Lago (UM), Lafayette Co., Oxford, 8 July 1976, G. Lee (UM); 20, 21 June 1977, A.E. Zuccaro (UM); 24 June 1977, P.K. Lago (PKL); 15 June 1980, P.K. Lago (PKL). Lamar Co. Lumberton, 25 Apr. 1919, G.F. Arnold (MEM). Marion Co. No locality, 16 Apr. 1970, W.H. Cross, on saffron yellow stickem-coated trap (MEM). Okibbeha Co. Agricultural College (Mississippi St. Univ.), 1 May 1916, J.C. McKee (MEM), 1 May 1923, R.A. McKnight (MEM), 25 June 1924, no collector (MEM). Stone Co. No locality, 20 Apr. 1974, P.H. Darst (UM); Univ. of Mississippi forest lands (headquarters), 19 May 1978, 10 Apr. 1980, 22 May 1980, P.K. Lago (UM); 4 mi. S.E. Perkinson, P.K. Lago (UM). Specimens examined — 19.

This large, strikingly marked species is active for a longer period than is *B. maculipennis*. Specimens have been collected in the state from April through early July. One male, collected 4 miles southeast of Perkinson (Stone County), was taken mid-afternoon on a sunny day and was flying along the margin of a pasture bordered by pine forest. This is the only pyrgotid I have seen in flight during daylight hours.

***Sphecomyiella valida* (Harris).**

Adams Co. 5 mi. S. Natchez, 5 July 1978, A.E. Zuccaro (AEZ). Lafayette Co. Oxford, 5 May 1977, A.E. Zuccaro (UM), 26 June 1977, 4 July 1978, 27, 29 June 1980, 2 July 1980, P.K. Lago (UM). Lamar Co. 4 mi. N. Baxterville, 19 Apr. 1979, P.K. Lago (UM). Oktibbeha Co. Agricultural College (Mississippi St. Univ.) 28 Aug. 1905, G.W. Herrick; 7 May 1914, G.F. Arnold; 13 Apr. 1917, N.D. Peets; 7 Apr. 1922, E.W. Stafford; 3 May 1922, J.M. Wallace (MEM). Stone Co. Univ. of Mississippi forest lands (headquarters), 18 May 1978, P.K. Lago (UM). Tate Co. Senatobia, 6 Aug. 1921, F. East (MEM). Winston Co. Fearn Springs, May 1917, no collector (MEM). Specimens examined — 21.

*Sphecomyiella valida* has the widest temporal distribution of the three Mississippi species. Collection records are scattered from early April through August.

All three species herein reported are widely distributed in Mississippi (Figure 1) and in eastern North America. Steyskal (1978) defined the distribution of *B. maculipennis* as Maryland, Iowa, Arizona and southward, and that of both *P. undata* and *S. valida* as the eastern United States west to Minnesota and Texas. Although not recorded from west of Texas by

Steyskal (1978), Cole (1969) stated that *S. valida* "may come west to Arizona" and listed two records from that state. Coles' statement seems somewhat skeptical; however, the following records indicate that the range of *S. valida* does extend into Arizona. Also included are records for *P. undata* and *S. valida* from North Dakota which seem to represent the northwestern limit of both species. No pyrogotids were previously known from North Dakota.

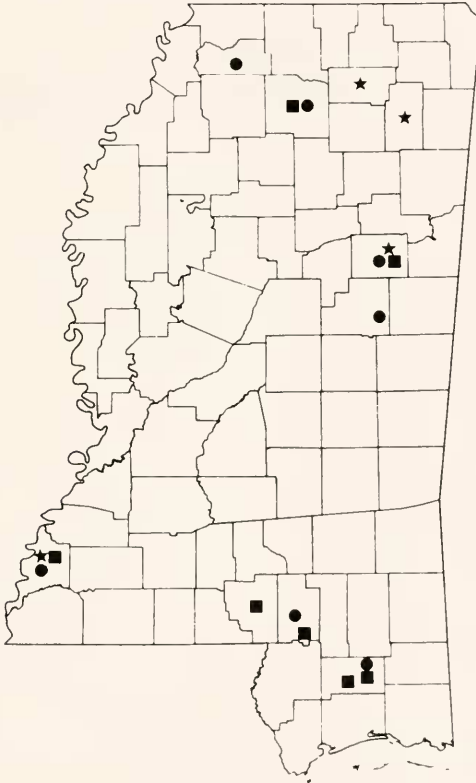


Figure 1. Distribution of pyrogotids in Mississippi.

- ★ — *Boreothrinax maculipennis*
- — *Pyrgota undata*
- — *Sphecomyiella valida*

### Additional Records

***Pyrgota undata.***

NORTH DAKOTA, *Pembian Co.*, Goschke Dam, Tongue River Game Mang. Area, 27 June 1974, P.K. Lago (PKL). Specimens examined — 1.

***Sphecomyiells valida.***

ARIZONA, *Santa Cruz Co.* Madera Canyon lodge, 17 July 1980, P.K. Lago and A.E. Zuccaro, Pena Blanca Lake, 18 July 1980, P.K. Lago and A.E. Zuccaro, (PKL). Specimens examined — 21, NORTH DAKOTA, *Richland Co.* Walcott Dunes, 21 May 1974, 19 May 1975, P.K. Lago, (PKL). McLeod Prairie, 28 May 1975, P.K. Lago, (PKL). Specimens examined — 6.

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